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BETTER
CHRYSANTHEMUMS

GEO. J. BALL, INC.
WEST CHICAGO, ILL.

1939

PLEASE NOTE

We are better equipped than ever this season for the production and shipping of clean, well-rooted mum cuttings to meet the growing demand for dependable stock. Shortages, however, may develop, **especially late in the season**, so we strongly advise placing your order early. As all orders must be filled in the order in which they are received, this point of ordering early is exceedingly important. Please note that no exceptions can be made to this rule.

All Mum cuttings supplied by us are guaranteed clean, free of disease, well-rooted, and carefully packed, and to reach you in nice shape.

INSTRUCTIONS FOR ORDERING

NOTE: When arrangements are made to ship cuttings on open account, it is understood they are sold on strictly 60 days net basis. The small margin under which these cuttings are sold, makes these terms necessary.

SPECIAL EARLY ORDER DISCOUNT. When an order is placed two months, or more, in advance of delivery date, a discount of 5% is allowed, **provided delivery date is April 1st, or later.** Be sure to show on your order, date cuttings are wanted.

Special Discounts for Large Orders: The following discounts, for quantities given, will apply on orders placed **at one time** for the quantity on which discount is taken.

5% discount for an order of 10,000
7 1/2 % discount for an order of 25,000
10% discount for an order of 50,000

Please note accompanying schedule showing rates per 100 and corresponding rates per 10. **We do not supply less than 10 of any variety,** except first year Novelties.

	Rate per 100	Rate per 10	Rate per 100	Rate per 10
\$	3.00	.50	\$ 8.00	\$ 1.50
	4.00	.50	10.00	1.50
	5.00	1.00	12.00	2.00
	6.00	1.00	15.00	2.50
	7.00	1.25	20.00	3.00

Please Note:

In figuring your order, please note that ten cuttings are billed at the ten rate; 15 or 20 also at the ten rate; 25 cuttings at the hundred rate; 250 cuttings or more, of one variety, at the thousand rate. **Please note this carefully.** Also, if your order should total 900 cuttings (for example: 100 each of 9 varieties at \$3.00, total \$27.50, while if 1000 are ordered, the thousand rate would apply at \$27.50). This point should be watched in figuring your order so that you may have advantage of the thousand rate, on the entire order. Thus, you will note, 1000 cuttings can be purchased for just a little more at the thousand rate, than 900 cuttings figured at the hundred rate **Watch this.**

Because of the perishable nature of Mum Cuttings, we do not send them C. O. D. but when necessary to do so, we request that 50% of the amount be enclosed with your order.

Shipping Information:

All our stock is propagated at Barberton, Ohio, from where it is shipped by Express Collect. **If your Express Office is different than your Post Office,** please be sure to note the correct Express Address on your order.

If cuttings are wanted by Parcel Post, be sure to add sufficient postage as all prices

are figured F. O. B. Barberton, Ohio. Approximate weights of various quantities of cuttings are as follows: 50 cuttings 2 lbs., 100, 4 lbs., 500, 15 lbs. 1000, 24 lbs. With this information you can secure the amount of postage necessary from your local Post Office.

If you are located on a Rural Mail Route, please be sure to **arrange with your Express Office** to notify you immediately on arrival of shipment, so that you can call for them promptly on arrival. Be sure to give us your Express Office if different from your Post Office.

To Our Canadian Customers:

It is necessary for you to obtain a permit from your Department of Agriculture at Ottawa for shipment into Canada. As all shipments go by Express, you are to forward us the **Permit Number only**, holding the permit itself which is necessary to clear the shipment from customs on arrival.

In case of Parcel Post shipments, be sure to apply for a **Parcel Post Permit**, in which case the label is sent you by your Agricultural Department which must be forwarded to us with your order.

We strongly urge that you send us your order just as early as possible to secure delivery wanted, as **all orders are shipped in the order in which they are received.**

FIGURE CAREFULLY



No use, Joe! No matter how you figure, Mum propagation is pretty expensive business.

Like most greenhouse crops today, there isn't a whole lot of profit in mums and what there is in them disappears completely if not well grown and the question of varieties carefully planned. The practical points of both these phases of mum growing will be found discussed on the last pages of this catalog. The matter of varieties is of special importance. Every successful mum grower drops some varieties and adds others every season. Real improvements on every crop we grow are available annually. Mums

in all classes are not an exception. Yes, we do occasionally get a new one that doesn't click, except for the Originator, but that is the inevitable price of progress. Early flowering thru black cloth shading is a phase of mumgrowing that is profitable for most growers and it will continue to be, for to do it successfully calls for earlier planting than can be done by some and the added cost of cloth keeps a few growers out of it. Also the tendency toward over doing the pompons and cutting down on the big ones. Question of Labor, no doubt, accounts for this. While there always will be plenty of bunch mums wanted, don't forget that when our public thinks of mums they have the big ones in mind and when good they will pay for them, and before you stop figuring on the mum crop, give some thought to your young stock, for there may be a chance to shave costs.

FIGURE THE COSTS OF value of good bench space for stock plants all winter, cost of insecticide and applying it all winter, value of your time propagating during *April* and *May*, cuttings lost thru rotting out. Loss in not having what you want *when you want to plant*. If you total these items and compare them with the cost of really good clean cuttings, when ordered in quantity, you will understand why we supplied over a million and a quarter mum cuttings the past season.

THERE IS A REASON

These cuttings are produced and sold in large quantities by specialists and on close margin. Their production entirely free of insects or disease is a scientific study. They are guaranteed to reach you in good condition. Whether you require 10 or 100,000, let us hear from you *and place your order early*.

"Enclose Your Mum With Your Seed Order"

NEW VARIETIES

On this and following pages you will find the season's approved novelties. They are all from well known dependable raisers. We have personally acquainted

ourselves with all these varieties; and if given a chance, they will be found a distinct advance in American Chrysanthemums.

Novelty Section DePetrис Introductions

Col. F. M. Alger

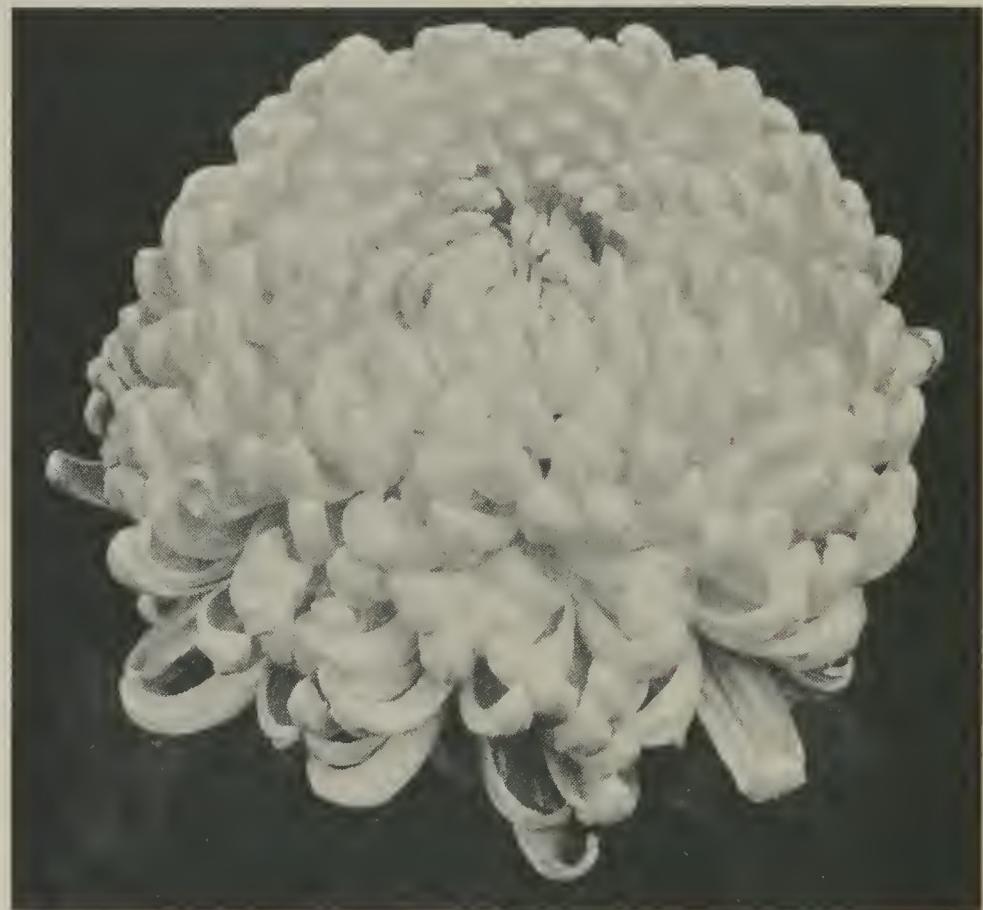
A large flowered standard variety producing closely incurved blooms about 7 in. across.

Color clear Pernet yellow the inside petals shading to golden yellow.

A clean vigorous grower attaining a height of about 5 feet. Excellent stem and foliage.

Produces a high percentage of perfect blooms from almost any bud but we recommend second crown or terminal buds taken the first part of September.

The variety matures November 5th to 10th and does not shatter. Because of its easy growing habit and its high percentage of good blooms which it produces this variety will become a favorite with growers desiring a good early mid season yellow.
Price for Rooted Cuttings, \$2.50 per 10, \$15. 100, \$125. per 1000



CAVALCADE

A late flowering pompon which possesses nearly every good characteristic sought by chrysanthemum growers.

Individual blooms measuring about 2½ inches across are freely produced on rigid and well formed sprays.

The full rounded flowers possess an unusual crisp substance.

The variety grows and breaks freely giving excellent production of many good sized and saleable sprays.

It attains a height of from 38 to 42 inches with small but thick and leathery foliage to the bottom of the plant, making an ideal variety for pot culture as well as for cutting.

The color of Cavalcade is a bright Mandarin red with each cupped petal showing a golden bronze reverse, the whole making a pleasing combination.

Matures from December 10th to 15th or in our locality about three weeks later than the popular variety Cordova.

Cavalcade is a premium variety possessing nearly all the qualifications which merit the name of "The Perfect Pompon."

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

PINK PEARL

A button pompon resulting from a cross between Jewell and Mary Lennon Hall, being very much like Jewell excepting that it matures about ten days later and possesses a more lively pink color. Its good habit of growth and good production make it a very worthy improvement upon an old standby.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

"Enclose Your Mum With Your Seed Order"

Novelty Section (Continued)

RISING SUN

A pompon resembling Pink Dot but a better grower with good stem and production. Individual flowers possess good substance and are larger than Pink Dot, matures about the 25th of October. Not a distinct novelty but a decided improvement on the present type.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

Bristol Nurseries Introductions

ROYAL CRIMSON

A large decorative pompon 3 inches across, an intensely rich crimson color. A better than average producer—bunching nicely—strong, sturdy growth 3 ft. or more. Flowering December 1st, it makes an excellent follow-up variety for Mrs. Mary Hooker, introduced in 1937, and is actually superior in quality.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

HARMONY

Compared to the variety Glow, introduced recently, it is deeper in color—a red orange with soft bronze shading—one of those glorious blends which commands immediate attention. Flowering about November 25th, it just precedes Glow. An excellent producer, it attains a height of 2½-3 feet.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

PINK LASSIE

A quality pink to follow Mrs. Morgan G. Bulkeley, maturing about November 15. Perfectly formed flower 2½ inches across. Clear bright pink with lavender shading. Vigorous growth, branching habit, and unusually good keeping qualities. Height 3 feet.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

Walter J. Engle Introductions

FAITH ENGLE

A small yellow anemone with golden yellow cushion. Flowers 2½ inches in diameter.

Well spaced sprays. Very heavy producer, with stiff stems and small foliage. Should be grown as natural sprays.

Matures November 15th to 25th. Well liked by the better retail trade.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

HOPE ENGLE

Late, rich bronze small anemone. Extremely productive with excellent growing habit.

Matures about November 25 and will keep until Christmas. Medium height. Good only when grown as natural sprays. This should prove a much needed late variety.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

PEGGY POESCH

Brilliant apricot large pompon, carried on large airy sprays. Grows very strong on stiff stems. Good producer. A real worth while variety to add to your list.

Matures November 10th

Won C. S. A. Silver Seedling Medal at Cincinnati Show 1937.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

Yoder Brothers Introductions

RED PRINCETON

A sport from Princeton and like it in every respect excepting color.

The color is of a bright reddish bronze which, combined with the many merits of Princeton, should make this variety popular.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

DECEMBER BEAUTY, Imp.

A pure white sport from December Beauty. We believe this variety will be well received by those who are interested in late mums. It combines the qualities of lateness, large size, good stem, and purity of color.

Price for Rooted Cuttings
\$2.50 per 10, \$15 per 100, \$125 per 1000

"Enclose Your Mum With Your Seed Order"

Large Flowering Commercial Varieties

In this catalog are two duplications of names as follows:

December Glory—A large mum.
December Glory—A pompon.

Innocense—A hardy Korean pompon.
Smith's Innocense—A white anemone.

When either of these varieties are ordered, kindly specify clearly which is intended.

NOTE

When variety **Gladys Pearson** is ordered, original stock will be shipped.

When **Dark Bronze Gladys Pearson** is requested, Oak Leaf, will be shipped.

Under Hardy Chrysanthemums we have listed variety
"Amelia." This is identical with variety "Pink Cushion."

X—Extra good or generally accepted best varieties.

S—Indicates varieties we find most suitable for shading.

P—Indicates varieties suitable for Pot Plants.

Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

	Name and Description	Height	Select	Matures	Price per	
			Bud		100	1000
XP	Ambassador. White. Extra large—long stemmed	Med.	Ter. Bud	Oct. 16-20	\$3.00	\$27.50
	Andrew Schmidt. Dark Pink. Sport from Seidewitz	Tall	Sept. 5	Thanks. & later.	3.00	27.50
X	Anna Kaskas. Golden bronze	Tall	Sept. 5-10	Nov. 1-5	4.00	35.00
	Apricot May Wallace. Apricot	Tall	Ter. Bud	Nov. 7-15	5.00	40.00
XP	Apricot Queen. Orange bronze	Med.	Sept. 5	Oct. 25	3.00	27.50
XS	Betsy Ross. Early White. Fairly hard, fine for shading	Tall	Aug. 25	Nov. 5	3.00	27.50
	Bonnafon DeLuxe. Rich golden yellow. Sport of Major Bonnaffon	Short	Sept. 10	Nov. 20	7.00	65.00
	Bonnafon Shibuya. Yellow	Med.	Ter. Bud	Nov. 15-30	3.00	27.50
XP	Bronze Frick. Bronze. Sport of Helen Frick	Short	Sept. 10	Thanks.	3.00	27.50
	Bronze Gem. Bronze	Tall	Ter. Bud	Nov. 20	4.00	35.00
P	Bronze Lode. Bronze. Sport from Gold Lode	Med.	Aug. 25	Oct. 1	7.00	65.00
XS	Camilla. White	Tall	Aug. 25	Oct. 18	3.00	27.50
XP	Cardonia. Deep rich yellow	Med.	Ter. Bud	Nov. 1-7	3.00	27.50
XP	Celestra. Yellow	Med.	Ter. Bud	Oct. 10	3.00	27.50
	Chadwick, Bronze. Bronze	Med.	Ter. Bud	Thanks.	3.00	27.50
	Chadwick, Golden. Yellow	Med.	Ter. Bud	Thanks.	3.00	27.50
	Chadwick, Pink. Pink.	Med.	Ter. Bud	Thanks.	3.00	27.50
X	Chadwick, White. White	Med.	Ter. Bud	Thanks.	3.00	27.50
	Chas. Rager. White.	Med.	Sept. 15	Nov. 10	3.00	27.00
X	Chas. W. Johnson. White	Med.	Sept. 10	Oct. 25	3.00	27.50
X	Chattanooga. White.	Med.	Sept. 20	Nov. 28	3.00	27.50
P	Christina. White. Sport of Rose Chochard	Short	Aug. 15	Oct. 20	3.00	27.50
	Chrysolora. Yellow	Med.	Aug. 15	Oct. 15	3.00	27.50
	Citronella. Large light yellow. There are better yellows	Short	Aug. 31	Oct. 25	3.00	27.50
	Clara B. Ford. Yellow	Med.	Sept. 20	Nov. 20	3.00	27.50
	Columbus Dispatch. Yellow. Large bloom	Med.	Sept. 1	Nov. 15	3.00	27.50
	Corona. Deep yellow	Tall	Ter. Bud	Oct. 25	3.00	27.50
	December Beauty. White, tinged with pink	Med.	Oct. 1-10	Dec. 1	3.00	27.50
	December Glory. White. Excellent for late.....	Med.	Sept. 30	Dec. 1	3.00	27.50
	December Queen. Yellow	Med.	Ter. Bud	Dec. 1	3.00	27.50
XS	Detroit News. Finest early bronze for shading	Med.	Aug. 30	Oct. 25	3.00	27.50
	Distinction. Pink	Med.	Ter. Bud	Thanks.	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Large Flowering Commercial Varieties (Continued)

	Name and Description	Height	Select Bud	Matures	Price per 100	Price per 1000
X	Dr. Enguehard. Rose pink. Shatters, but fine color	Med.	Sept. 5	Thanks.	3.00	27.50
	Early Frost. White. Early but not large	Short	Early	Early	3.00	27.50
P	Edgar Stillman Kelly. White	Med.	Sept. 15	Nov. 15	3.00	27.50
	Edwin Seidewitz. Bright pink	Tall	Sept. 5	Thanks.	3.00	27.50
	Evening Glow. Yellow	Med.	Sept. 10	Oct. 25	3.00	27.50
	Evening Star. Pink	Tall	Sept. 5	Nov. 1	3.00	27.50
P	Favorite. White	Tall	Sept. 5	Nov. 15	3.00	27.50
P	Floyd Gibbons. Salmon pink with buff reverse	Short	Sept. 15	Nov. 8	3.00	27.50
X	Friendly Call. Yellow	Med.	Ter. Bud	Nov. 25-Dec.	7.00	65.00
XP	Friendly Rival. Golden yellow. Fine color, but shatters	Med.	Sept. 10	Thanks.	3.00	27.50
XP	Garnet King. Red	Short	Sept. 20	Nov. 20-30	3.00	27.50
	Gladys Pearson. Fine standard bronze. Yellow when shaded; excellent	Med.	Sept. 30	Nov. 20-30	3.00	27.50
	Glenview. Bronze	Short	Sept. 10	Nov. 24	3.00	27.50
XP	Glisters. Bronze. Extra attractive bronze	Med.	Ter. Bud	Nov. 1	3.00	27.50
XP	Gold Lode. Yellow. Soft, but easy grower. Popular with retail growers	Med.	Aug. 25	Oct. 1	3.00	27.50
	Golden Arbina. Deep yellow	Med.	Ter. Bud	Nov. 20-25	7.00	65.00
	Golden Bronze. Golden yellow with tints of bronze	Tall	Ter. Bud	Oct. 25	3.00	27.50
	Golden Celebration. Yellow	Tall	Sept. 15	Nov. 20	3.00	27.50
XSP	Golden Glory. Yellow	Short	Aug. 25	Nov. 1	3.00	27.50
	Golden Glow, Imp. Yellow	Med.	July 10	Sept. 1	3.00	27.50
	Golden Measure. Golden yellow	Tall	Ter. Bud	Oct. 25	3.00	27.50
X	Golden Mrs. Ross. Golden yellow. (Improved Nellie T. Ross)	Tall	Early Oct.	Nov. 28	3.00	27.50
	Golden Oak. Golden bronze. (Good stiff stem)	Med.	Ter. Bud	Nov. 20	12.00	100.00
	Golden October. Rich golden yellow	Med.	Aug. 25	Oct. 10	3.00	27.50
XS	Golden Pearson. Yellow. Sport of Gladys Pearson	Med.	Sept. 30	Thanks.	3.00	27.50
	Golden Seidewitz. Yellow. Sport of Seidewitz	Tall	Sept. 5	Thanks.	3.00	27.50
	Golden Topaz. Golden yellow	Med.	Sept. 10	Nov. 10	3.00	27.50
SP	Golden Wave. Yellow	Short	Sept. 5	Oct. 20	3.00	27.50
XS	Good News. Yellow. Sport of Detroit News. Hard flower and the finest early yellow for shading	Med.	Aug. 30	Oct. 25	3.00	27.50
	Governor Green. Crimson, with old gold reverse	Short	Aug. 15	Oct. 15	3.00	27.50
P	Harvard. Crimson	Med.	Sept. 30	Nov. 30	3.00	27.50
XP	Helen Frick. Pink	Short	Sept. 10	Thanks.	3.00	27.50
SP	Hilda Bergen. Bronze	Short	Aug. 25	Oct. 25	3.00	27.50
P	Honey Dew. Yellow	Short	Ter. Bud	Nov. 15	3.00	27.50
	Immaculate. White	Med.	Ter. Bud	Nov. 1-7	3.00	27.50
	Indianapolis Pink. Light lavender. Darker reverse	Med.	Ter. Bud	Nov. 12	12.00	100.00
	Indian Chief. Deep reddish bronze with golden buff reverse	Med.	Sept. 5	Nov. 5-10	8.00	75.00
XS	Indianola. Light bronze	Med.	Aug. 25	Oct. 8	3.00	27.50
SP	Justrite. Pink	Short	Ter. Bud	Oct. 15	3.00	27.50
XSP	J. W. Prince. (Improved Chieftain). An excellent pink	Short	Aug. 30	Nov. 1	3.00	27.50
	Keystone. Bronze	Med.	Aug. 30	Oct. 22	3.00	27.50
	Lemon Queen. Yellow	Med.	Ter. Bud	Thanks.	3.00	27.50
X	Leroy Zang. Yellow. Sport of Golden Pearson	Med.	Sept. 30	Thanks.	3.00	27.50
	Lustre. Pink	Short	Aug. 25	Oct. 8	3.00	27.50
	Major Bonnaffon. Yellow	Short	Sept. 10	Nov. 20	3.00	27.50
	Major Edward Bowes. Pink, not long stemmed, but excellent color	Med.	Aug. 30	Oct. 16	3.00	27.50
X	Marie de Petris. Yellow	Short	Sept. 15	Nov. 25	3.00	27.50
	Marketeteer. White. One of the finest commercial whites	Tall	Ter. Bud	Nov. 20		
				Thanks	12.00	100.00
	Mark Twain. Bronze	Med.	Sept. 20	Nov. 20	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Large Flowering Commercial Varieties (Continued)

	Name and Description	Height	Select		Price per	
			Bud	Matures	100	1000
X	Mefo. White	Med.	Sept. 15	Nov. 20	3.00	27.50
	Minewa. Golden bronze	Med.	Aug. 10	Oct. 15	5.00	40.00
X	Mistletoe, Bronze. Bronze	Med.	Sept. 30	Dec.	3.00	27.50
X	Mistletoe, Golden. Yellow	Med.	Sept. 30	Dec.	3.00	27.50
X	Mistletoe, Pink. Pink	Med.	Sept. 30	Dec.	3.00	27.50
X	Mistletoe, White, Imp. White	Med.	Sept. 30	Dec.	3.00	27.50
X	Mohawk Chief. Crimson	Med.	Oct. 1	Nov. 30	3.00	27.50
X	Monument. White. An excellent midseason white	Med.	Sept. 10	Nov. 5-15	3.00	27.50
	Mrs. A. J. Stahelin. Bronze with reverse. Petals yellow	Med.	Ter. Bud	Nov. 15	3.00	27.50
X	Mrs. David F. Roy. Crimson with bronze reverse. An attractive color for variety	Short	Sept. 15	Nov. 15	3.00	27.50
XSP	Mrs. H. E. Kidder. Bright yellow, fine color but shatters some	Med.	Aug. 25	Oct. 25	3.00	27.50
	Mrs. Wm. Thaw, Jr. Yellow	Tall	Ter. Bud	Nov. 10	3.00	27.50
X	Oak Leaf. Dark bronze	Med.	Sept. 30	Nov. 20-30	3.00	27.50
	Oconto. White	Med.	Aug. 25	Oct. 15	3.00	27.50
X	October Rose. Pink	Med.	Ter. Bud	Oct. 18	3.00	27.50
	Old Rose. Pink	Med.	Ter. Bud	Early Nov.	3.00	27.50
	Orchid Queen. Orchid Pink	Tall	Ter. Bud	Nov. 15	6.00	50.00
XP	Peter John. Light pink. Sport of Thanksgiving Pink	Short	Sept. 15	Thanks.	3.00	27.50
XP	Pink Beauty. Pink	Short	Ter. Bud	Oct. 20	4.00	35.00
XS	Pink Chief. Excellent pink for early shading	Tall	Ter. Bud	Oct. 12	3.00	27.50
	Pink Dawn. Light pink	Med.	Sept. 10-15	Oct. 25	7.00	65.00
	Pink Delight. Rose pink	Tall	Sept. 10	Nov. 1	3.00	27.50
	Pink Treasure. Pink	Short	Sept. 20	Nov. 10	3.00	27.50
XP	Quaker Maid. White. Color not clear	Med.	Aug. 25	Oct. 5	3.00	27.50
	R. B. Mellon. Light bronze	Tall	Sept. 1	Nov. 1	4.00	35.00
	Richmond. Yellow	Med.	Aug. 25	Nov. 1	3.00	27.50
P	R. M. Calkins. Golden yellow	Med.	Sept. 20	Nov. 25-30	3.00	27.50
	Rcsa Raisa. Pink	Short	Sept. 20	Thanks.	3.00	27.50
P	Rose Chochard. Good early pink	Short	Aug. 15	Oct. 20	3.00	27.50
XS	Rose Glory. Pink	Med.	Ter. Bud	Oct. 15-20	3.00	27.50
	Rose Marie. Pink	Tall	Aug. 5	Oct. 1	3.00	27.50
	Rose Perfection. Pink	Short	Sept. 10	Nov. 5-10	3.00	27.50
P	Secretary Nehrling. Bright yellow	Med.	Aug. 15-20	Nov. 15-20	3.00	27.50
	Silver Dawn. White	Med.	Aug. 25	Oct. 18-20	3.00	27.50
XS	Silver Sheen. White. Hard flower; finest early white for shading	Med.	Aug. 30	Oct. 20	3.00	27.50
	Smith's Early White. White	Tall	Aug. 10	Oct. 2	3.00	27.50
XP	Smith's Late White. White	Short	Sept. 30	Dec. 15	3.00	27.50
P	Smith's Superlative. Bright yellow	Med.	Aug. 25	Oct. 25	3.00	27.50
XS	Snow White. White. Trifle soft but very fine shaded	Med.	Ter. Bud	Nov. 1	3.00	27.50
X	Stately White. White	Med.	Ter. Bud	Nov. 1	3.00	27.50
	Sunbeam. Bright yellow	Med.	Sept. 20	Thanks.	3.00	27.50
XSP	Sunglow. Yellow	Med.	Aug. 15	Oct. 25	3.00	27.50
XP	Sun Gold. Yellow. Better as a pot plant than for cutting	Med.	Sept. 30	Thanks.	3.00	27.50
	Tekonsha. Bronze	Med.	Sept. 10	Thanks.	3.00	27.50
P	Thanksgiving Pink. Dark pink	Short	Sept. 15	Thanks.	3.00	27.50
	Timothy Eaton. White	Tall	Sept. 15	Nov. 20	3.00	27.50
	Tints of Gold. Bronze	Med.	Aug. 15	Oct. 10	3.00	27.50
XP	Tobin's Late Yellow. Yellow. Sport of Smith's Late White	Short	Sept. 30	Dec. 15	3.00	27.50
	Tom Browne. White. Too soft for shading	Med.	Ter. Bud	Nov. 20-30	3.00	27.50
P	White Chief. White	Short	Ter. Bud	Oct. 18	3.00	27.50
XS	White Chieftain. White	Short	Aug. 31	Nov. 1	3.00	27.50
	White Distinction. White	Med.	Ter. Bud	Thanks.	3.00	27.50
P	White Frick. White. Sport of Helen Frick	Short	Ter. Bud	Thanks.	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Large Flowering Commercial Varieties (Continued)

	Name and Description	Height	Select Bud	Matures	Price per 100	Price per 1000
	White Seidewitz. White. Sport of Edwin Seidewitz	Tall	Sept. 5	Thanks.	3.00	27.50
	Whittier. Yellow	Med.	Sept. 15	Nov. 15	3.00	27.50
X	William Didden. Yellow. Sport of Indianola	Med.	Aug. 25	Oct. 8	3.00	27.50
	Windsor Gold. Deep golden yellow. A little soft but very good color	Med.	Ter. Bud	Oct. 28	8.00	75.00
X	Yellow Ambassador. Yellow. Sport of Ambassador	Med.	Ter. Bud	Oct. 16-20	3.00	27.50
	Yellow Chattanooga. Light yellow	Med.	Sept. 20	Nov. 28	3.00	27.50
	Yellow Chieftain. Yellow. Sport of Chieftain	Short	Aug. 31	Nov. 1	6.00	50.00
	Yellow December Glory. Light yellow	Med.	Sept. 30	Dec. 1-10	3.00	27.50
	Yellow Frost. Yellow	Short	Early	Early	3.00	27.50
	Yellow Gold. Bright golden yellow	Tall	Ter. Bud	Nov. 1-15	3.00	27.50
X	Yellow Mefo. Yellow. Sport of Mefo.	Med.	Sept. 15	Nov. 20	3.00	27.50
X	Yellow Monument. Yellow. Sport of Monument	Med.	Sept. 10	Nov. 5-15	3.00	27.50

Exhibition Varieties

	Name and Description	Height	Select Bud	Matures	Price per 100	Price per 1000
	Alice Benson. White	Med.	2nd Crown	Nov. 1	8.00	75.00
X	Dr. J. M. Inglis. Wine purple amaranth with silver reverse	Tall	Aug. 25	Nov. 1	8.00	75.00
	Elberon. Pink	Med.	Aug. 30	Nov. 1	8.00	75.00
X	Golden Majestic. Bright yellow	Med.	Aug. 20	Oct. 25		
				Nov. 1	8.00	75.00
X	Grace Sturgis. Wine red with pinkish-silver reverse. Attractive novelty color	Tall	Aug. 25	Oct. 20	6.00	50.00
	J. R. Booth. Yellow	Med.	Aug. 15	Nov. 1	8.00	75.00
	La France. Purple	Med.	Aug. 15	Oct. 28	6.00	50.00
X	Louisa Pickett. White	Med.	Aug. 10	Nov. 1-15	8.00	75.00
X	Majestic. Clear, shiny amber bronze	Med.	Aug. 20	Oct. 25	8.00	75.00
X	Marian H. Uffinger. Bronzy crimson with a gold reverse	Med.	Aug. 20-25	Nov. 1	8.00	75.00
	Mrs. G. G. Mason. Blood red with golden reverse	Med.	Aug. 20	Oct. 25-		
				Nov. 1	8.00	75.00
X	Mrs. H. S. Firestone. Chamois buff	Short	Aug. 25	Nov. 1	8.00	75.00
	Mrs. Jules Leeds. Blood red	Short	Aug. 25	Nov. 10	8.00	75.00
	Nagiroc. Golden bronze	Med.	Aug. 15	Nov. 1	8.00	75.00
	Nerissa. Rosy lavender	Med.	Sept. 5	Nov. 5	8.00	75.00
X	Red Majestic. Bronzy red	Med.	Aug. 25	Nov. 1	8.00	75.00
	Rosanda. Old rose	Tall	Sept. 10	Nov. 1	8.00	75.00
X	Thos. W. Pickett. Pink	Med.	Aug. 10	Nov. 1-15	8.00	75.00
X	Turner, Bronze. Light bronze	Med.	Aug. 25	Nov. 5	6.00	50.00
X	Turner, Pink. (Mrs. Leslie Davis) Pink	Med.	Aug. 25	Nov. 5	6.00	50.00
X	Turner, William. White	Med.	Aug. 25	Nov. 5	6.00	50.00
X	Turner, Yellow. Yellow	Med.	Aug. 25	Nov. 5	6.00	50.00
X	Vermont. Pink	Tall	Aug. 10	Nov. 1-15	8.00	75.00
	W. H. Waite. Bronze	Short	Aug. 15	Nov. 5	6.00	50.00
X	W. H. Waite, Imp. Red	Short	Aug. 15	Nov. 5	6.00	50.00
X	Yellow Pickett. Yellow	Med.	Aug. 10	Nov. 1-15	8.00	75.00

"Enclose Your Mum With Your Seed Order"

Odd Formed--Feathery and Threadlike--Varieties

Name and Description	Height	Select		Price per	
		Bud	Matures	100	1000
Benten. Bronze and deep red tips with green center	Med.	Ter. Bud	Nov. 5-10	6.00	50.00
Japanese Maiden. Yellow. Medium tube	Med.	Ter. Bud	Nov. 25	6.00	50.00
Miss Gena Harwood. Rosy mauve. Sport from Rayonnante	Med.	Ter. Bud	Nov. 20	6.00	50.00
Ohkwan. Yellow. Fine tube petals	Med.	Ter. Bud	Nov. 1	6.00	50.00
Patricia Grace. Shell pink	Med.	Ter. Bud	Nov. 5	6.00	50.00
Peggy Ann Hoover. Lavender	Short	Ter. Bud	Nov. 5	6.00	50.00
Pride of Tokyo. Creamy pink. A novelty with odd tubular petals	Tall	Aug. 25	Nov. 10	6.00	50.00
Rayonnante. Pale rose pink. Long cordlike petals	Med.	Ter. Bud	Nov. 1	6.00	50.00
Sam Caswell. Bright rose. Feathery type	Med.	Ter. Bud	Oct. 25	6.00	50.00
The Dean. Pure white. Light green center	Med.	Ter. Bud	Nov. 1	6.00	50.00
Unique. Rich wine red	Tall	Ter. Bud	Dec.	6.00	50.00
Yellow Taggart. Yellow quilled petals covered with hair	Med.	Ter. Bud	Nov. 1	6.00	50.00
Yomei. Golden tube petals with red spoon-end tips	Med.	Ter. Bud	Nov. 10	6.00	50.00

Pompons--Large Flowering and Button Types

Under the heading of type, we attempt to classify pompons into large and button types. The distinction is largely one of size, though the latter classification contains more of the true, compact, rounded type than the former.

X—Extra good or generally accepted best varieties.

S—Indicates varieties we find most suitable for shading.

P—Indicates varieties suitable for Pot Plants.

D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

Name and Description	Height	Type	Price per		
			Matures	100	1000
Abelard. Orchid pink	Med.	L. Pomp.	Oct. 30	7.00	65.00
D Acto. Rose pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
Agate. Yellow w/ red eye	Short	Button	Oct. 25	5.00	40.00
Alecia. Bronze	Med.	L. Pomp.	Oct. 30	3.00	27.50
XP Alice. Pink	Med.	L. Pomp.	Nov. 15	3.00	27.50
D Angelo. Light pink	Short	L. Pomp.	Oct. 25	3.00	27.50
SX Arcadia. Pure white. Excellent for shading. Perfect blooms	Med.	L. Pomp.	Oct. 25	8.00	75.00
X Avalon. Orange bronze	Med.	L. Pomp.	Thanks.	4.00	35.00
P Baby. Yellow	Short	S. Button	Nov. 10	3.00	27.50
PD Ball of Gold. Yellow	Med.	L. Pomp.	Nov. 20	3.00	27.50
Betty Price. Brilliant orange suffused with light bronze	Med.	Button	Nov. 25	3.00	27.50
Betty Watkins. Bronzy yellow. Fine shaded for late October	Med.	L. Pomp.	Thanks.	3.00	27.50
X Beuneta. Bronze tipped w/ gold	Med.	L. Button	Nov. 25	3.00	27.50
X Big Baby. Yellow	Med.	Button	Thanks.	3.00	27.50
Bobbie. Creamy white. Good long stem for shading	Med.	L. Pomp.	Nov. 15-20	3.00	27.50
Bokhara. Bronze	Med.	L. Pomp.	Oct. 25	3.00	27.50
XP Bonnibell. Orange buff	Short	L. Pomp.	Oct. 15	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Pompons—Large Flowering and Button Types (Cont.)

Name and Description		Height	Type	Matures	Price per	
					100	1000
Bonnie Maid.	Pink	Med.	Button	Oct. 18	3.00	27.50
Bridal Bells.	White	Med.	L. Pomp.	Dec. 15		
				& Later.	5.00	40.00
S Bright Spot.	Shell pink. Bright spot in center	Med.	Button	Oct. 25	12.00	100.00
X Bristolite.	Bronze	Med.	L. Pomp.	Thanks.	3.00	27.50
D Bronze Acto.	Bronze. Sport of Acto	Med.	L. Pomp.	Nov. 1	3.00	27.50
X Bronze Beauty.	Bronze	Med.	L. Pomp.	Thanks.	3.00	27.50
Bronze Doty.	Bronze	Med.	L. Pomp.	Nov. 1	3.00	27.50
Bronze Ermalinda.	Dark bronze	Med.	L. Pomp.	Oct. 25	3.00	27.50
S Bronze Queen.	Dark bronze	Tall	Button	Oct. 25	3.00	27.50
X Buttercup.	Yellow	Tall	L. Pomp.	Dec. 5	3.00	27.50
X Campfire.	Red	Tall	L. Pomp.	Nov. 20	3.00	27.50
D Capt. Blood.	Red with gold tips	Med.	L. Pomp.	Thanks.	8.00	75.00
XS Capt. Cook.	Pink. Long stemmed	Tall	L. Pomp.	Oct. 20	3.00	27.50
D Carlina Lee.	Dark rich red	Med.	L. Pomp.	Oct. 20-25	7.00	65.00
Catherine.	Bronze. Color similar to Legal Tender	Med.	L. Pomp.	Nov. 20		
				& Later	4.00	35.00
X Chicago Pearl.	White. Very excellent	Med.	L. Pomp.	Nov. 15	3.00	27.50
Christmas Cheer.	Deep yellow	Med.	L. Pomp.	Dec. 15	5.00	40.00
X Christmas Gold.	Bright yellow	Med.	S. Button	Dec. 1	3.00	27.50
Clara Jameson Imp.	Bronze	Med.	Button	Oct. 16	3.00	27.50
X Clare.	White	Short	S. Button	Nov. 15	3.00	27.50
Comanche.	Chestnut brown with yellow reverse	Med.	L. Pomp.	Dec. 15	5.00	40.00
Cora Peck Buhl.	Yellow. Fine color but not heavy producer	Tall	L. Pomp.	Oct. 25	3.00	27.50
X Cordova.	White	Med.	L. Pomp.	Thanks.	3.00	27.50
Creole.	Bronze	Tall	L. Pomp.	Nov. 5	4.00	35.00
Crystal Jewell.	White. Heavy producer	Tall	Button	Nov. 20-30	3.00	27.50
D Crystal White.	White	Tall	L. Pomp.	Nov. 10	3.00	27.50
X Dainty Maid.	White tinged with pink	Med.	S. Button	Nov. 1	3.00	27.50
P Dark Pink Jewell.	Dark pink. Sport from Jewell	Short	L. Button	Oct. 1-15	8.00	75.00
X December Glory. (Pomp.)	White	Med.	L. Pomp.	Dec.	3.00	27.50
Derigold.	Glistening lemon yellow	Tall	L. Pomp.	Nov. 10	12.00	100.00
Dorothy Nehrling.	Deep rose pink	Med.	Button	Nov. 15-20	5.00	40.00
Dorothy Turner.	Bronze	Med.	L. Pomp.	Thanks.	3.00	27.50
Dream.	Pink. Semi-Dbl. Attractive color, long stemmed	Med.	L. Pomp.	Nov. 20	3.00	27.50
Earliwhite.	White	Med.	L. Pomp.	Oct. 10	3.00	27.50
Ectasy.	Clear pink	Tall	L. Pomp.	Oct. 25	4.00	35.00
XD Edith Newberry.	Orange rust	Tall	L. Pomp.	Nov. 5	3.00	27.50
Elizabeth Peterson.	Orange crimson	Med.	L. Pomp.	Oct. 23	7.00	65.00
XS Elora.	Pearly white.	Tall	L. Pomp.	Nov. 1-10	3.00	27.50
Ermalinda.	Old rose	Med.	L. Pomp.	Oct. 25	3.00	27.50
P Ethel.	Bronze	Med.	Button	Oct. 25	3.00	27.50
XS Fez.	Chestnut-crimson	Med.	Button	Nov. 10	3.00	27.50
D Fire Ball.	Bright crimson	Tall	L. Pomp.	Nov. 2	3.00	27.50
S Fire Bird.	Red bronze	Med.	L. Pomp.	Oct. 25	3.00	27.50
Geraldine.	Lemon yellow	Med.	Button	Dec. 1	5.00	40.00
X Glow.	Orange. Reddish orange at center	Tall	L. Pomp.	Thanks.	3.00	27.50
XD Gold Coin.	Yellow	Med.	L. Pomp.	Dec. 1	3.00	27.50
Gold Drop.	Old gold	Med.	L. Pomp.	Nov. 1	3.00	27.50
XS Gold Finch.	Yellow	Med.	L. Pomp.	Oct. 20	3.00	27.50
P Gold Mine.	Yellow	Short	Button	Nov. 1	3.00	27.50
X Gold Tips.	Bronze and gold	Med.	L. Pomp.	Thanks.	3.00	27.50
Golden Climax.	Yellow	Med.	Button	Nov. 15	3.00	27.50
D Golden Fairy.	Yellow	Med.	L. Pomp.	Oct. 20-30	7.00	65.00
X Golden Fleece.	Yellow	Med.	L. Pomp.	Nov. 25	4.00	35.00
XPD Golden Herald.	Deep golden yellow	Med.	L. Pomp.	Oct. 10-15	3.00	27.50
Golden Nymph.	Bronze w/ reverse of petals gold	Med.	S. Button	Dec. 10	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Pompons—Large Flowering and Button Types (Cont.)

	Name and Description	Height	Type	Matures	Price per	
					100	1000
X	Golden Sceptre. Yellow	Tall	L. Button	Nov. 25	3.00	27.50
X	Golden Splendor. Bright yellow	Med.	L. Pomp.	Nov. 6	3.00	27.50
S	Golden Spray. Yellow	Med.	L. Pomp.	Oct. 15	4.00	35.00
	Golden Varsity. Yellow. Sport of Varsity, deeper shade	Short	S. Button	Nov. 10	3.00	27.50
P	Governor Lake. Reddish bronze	Short	L. Pomp.	Thanks.	3.00	27.50
	Grenadier. Red	Med.	L. Pomp.	Nov. 10	3.00	27.50
	Greta. White	Med.	L. Pomp.	Oct. 20	3.00	27.50
	Hasegawa Gold. Yellow	Med.	L. Pomp.	Dec. 1	3.00	27.50
	Ida Imp. Yellow	Med.	L. Pomp.	Oct. 10	3.00	27.50
XSP	Irene. White	Short	Button	Oct. 15-20	3.00	27.50
XD	Irene Rich. Pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
	Iroquois. Bronze. Open sprays on stiff stems	Med.	L. Pomp.	Dec. 1	7.00	65.00
XS	Jemima. Excellent bronze	Med.	L. Button	Oct. 28	3.00	27.50
	Jessie. Deep rose pink. Nice high rounded pompon	Med.	L. Pomp.	Oct. 25	7.00	65.00
XSP	Jewell. Bright pink	Short	L. Button	Oct. 1-15	3.00	27.50
	Joan. Bronzy orange	Med.	L. Pomp.	Nov. 20	3.00	27.50
	Joan Wells. Bronze. Sport of Pink Dot	Med.	L. Pomp.	Oct. 25	3.00	27.50
	Juva Nicholson. Yellow	Med.	L. Pomp.	Nov. 15	3.00	27.50
	LaVera. Pink	Med.	L. Pomp.	Nov. 1-10	3.00	27.50
X	Legal Tender. Bronze and gold	Med.	L. Pomp.	Nov. 20	3.00	27.50
	Leileh. Rose pink. Too soft for shading	Tall	L. Pomp.	Oct. 15	3.00	27.50
	Letitia. White w/ pink center	Tall	L. Pomp.	Oct. 15	3.00	27.50
	Lilac. Pink	Tall	L. Pomp.	Oct. 15	3.00	27.50
XD	Lillian Doty. Shell pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
XP	Lois. Golden yellow	Med.	Button	Nov. 18	3.00	27.50
	Long Island Sunshine. Bright yellow	Tall	L. Pomp.	Thanks.		
				& Later.	4.00	35.00
	Loris. Yellow	Med.	L. Pomp.	Dec. 1	7.00	65.00
	Louise Davenport. Bronze	Med.	Button	Nov. 10	3.00	27.50
	Lucinda. Deep pink	Tall	L. Pomp.	Nov. 12-20	3.00	27.50
	Magatha. White with dark eye	Med.	L. Pomp.	Nov. 10	3.00	27.50
	Manchukuo. Chestnut sorrel. Well formed sprays	Med.	L. Pomp.	Nov. 10	12.00	100.00
D	Marianna. White	Med.	L. Pomp.	Nov. 1-5	3.00	27.50
DXS	Mary Lennon Hall. Clear, rich yellow	Tall	L. Pomp.	Nov. 1	3.00	27.50
XP	Mary Pickford. White	Short	Button	Nov. 1	3.00	27.50
D	Masaka. Yellow	Med.	L. Pomp.	Oct. 20	3.00	27.50
D	Masterpiece. Tourmaline pink	Med.	L. Pomp.	Nov. 15	3.00	27.50
S	Minong. White	Short	Button	Oct. 20-25	3.00	27.50
X	Modena. Yellow	Med.	L. Button	Nov. 30	3.00	27.50
P	Mrs. Beu. Good standard bronze	Short	L. Pomp.	Thanks.	3.00	27.50
X	Mrs. Mary Hooker. Red	Tall	L. Pomp.	Nov. 15	4.00	35.00
XS	Mrs. Morgan G. Bulkeley. Pink, extra choice shade. Very good substance	Med.	L. Pomp.	Nov. 10	8.00	75.00
	Mrs. N. G. Moore. White. Sport of Olivia	Med.	L. Pomp.	Dec. 1-10	3.00	27.50
D	Muskoka. Bronze	Tall	L. Pomp.	Nov. 10	3.00	27.50
	Nellie Kleris. Lavender pink	Tall	L. Pomp.	Oct. 25	3.00	27.50
XS	New York. Bronze. Must be planted close for good production	Med.	Button	Nov. 15	3.00	27.50
XP	November Bronze. Orange bronze	Med.	L. Pomp.	Nov. 15	3.00	27.50
	Nubian. Bronzy red	Tall	L. Pomp.	Oct. 15-20	3.00	27.50
XSP	Nuggets. Our best early yellow for shading	Short	Button	Oct. 25	3.00	27.50
X	Olivia. Pink	Med.	L. Pomp.	Dec.	3.00	27.50
	Ottawa. Orange bronze	Med.	Button	Thanks.	7.00	65.00
X	Pagosa. Dark pink	Med.	L. Pomp.	Dec. 5	3.00	27.50
XP	Patsy Dowd. Red	Short	Button	Nov. 5	3.00	27.50
	Pauline Wilcox. Bronze	Med.	L. Pomp.	Nov. 5	3.00	27.50
	Penguin. White. Unusually heavy production	Med.	Button	Nov. 10	8.00	75.00
	Perfecto. Yellow. Similar to Rodell in color	Med.	L. Pomp.	Thanks.	7.00	65.00

"Enclose Your Mum With Your Seed Order"

Pompons—Large Flowering and Button Types (Cont.)

	Name and Description	Height	Type	Matures	Price per	
					100	1000
P	Persian Rose. Brilliant rose pink. Distinctive color	Short	L. Button	Oct. 20	8.00	75.00
XS	Pink Dot. White, with pink center, very excellent	Med.	L. Pomp.	Oct. 25	3.00	27.50
	Pink Popcorn. Pink	Med.	Button	Oct. 30	3.00	27.50
XSP	Princeton. Golden yellow suffused with orange, not heavy producer unless planted close	Med.	L. Pomp.	Nov. 15	3.00	27.50
P	Red Beau. Reddish bronze	Short	L. Pomp.	Thanks.	3.00	27.50
XS	Rev. Horace Bushnell. White with cream center. Sport of Mrs. Morgan Bulkeley	Med.	L. Pomp.	Nov. 10	8.00	75.00
XS	Robin Hood. Rich deep red	Med.	Button	Early Nov.	3.00	27.50
XSP	Rodell Imp. Yellow. Sport of Rodell producing larger flowers—excellent	Short	Button	Oct. 20	3.00	27.50
XS	Roman Bronze. Sport of Capt. Cook	Tall	L. Pomp.	Oct. 20	3.00	27.50
D	Rose Charm. Rose pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
X	Roselea. Pink	Med.	L. Pomp.	Dec. 1	3.00	27.50
	Rosy Dot. White with rose pink center	Med.	Button	Nov. 1	7.00	65.00
	Rowenna. Bronze	Tall	L. Pomp.	Thanks.	3.00	27.50
	Royal Queen. White	Med.	L. Pomp.	Dec. 5	3.00	27.50
	Sarda. Deep pink. Sport of Pink Dot	Med.	L. Pomp.	Oct. 25	3.00	27.50
XSD	Sea Gull. White	Med.	L. Pomp.	Nov. 1	3.00	27.50
SD	Silver Ball. White	Med.	L. Pomp.	Oct. 12	3.00	27.50
P	Silver Bells. White	Med.	Button	Oct. 15	4.00	35.00
X	Silver Star. White	Tall	L. Pomp.	Dec. 5	3.00	27.50
XS	Silver Tips. Bright pink with silver tips	Med.	L. Pomp.	Nov. 10	3.00	27.50
	Snow Cloud. White	Med.	L. Pomp.	Oct. 15	3.00	27.50
S	Source d Or. Bronze	Med.	L. Pomp.	Nov. 1	3.00	27.50
	St. Louis Gold. Deep golden yellow. Sport of Dorothy Turner	Med.	L. Pomp.	Thanks.	4.00	35.00
P	Suntan. Bronze	Med.	L. Pomp.	Oct. 25	3.00	27.50
X	Thyra. Dark pink	Med.	L. Pomp.	Nov. 1	3.00	27.50
X	Toyko. Yellow	Med.	Button	Dec.	3.00	27.50
X	Tom Pearson. Deep gold	Tall	L. Pomp.	Nov. 15	3.00	27.50
	Tonquin. Rose color	Med.	L. Pomp.	Dec. 10	3.00	27.50
	Touchdown. White with yellow cast at center	Med.	L. Pomp.	Oct. 25	3.00	27.50
D	Unalga. Yellow	Med.	L. Pomp.	Nov. 25	3.00	27.50
X	Usona. Pink	Med.	L. Pomp.	Thanks.	3.00	27.50
	Uvalda. White	Med.	L. Pomp.	Oct. 10	3.00	27.50
XD	Vera Victoria. Yellow	Med.	L. Pomp.	Nov. 1	3.00	27.50
	Vivian. Orange bronze	Med.	S. Button	Oct. 20	7.00	65.00
	Western Beauty. Pink	Short	L. Pomp.	Nov. 15-25	3.00	27.50
XSD	White Doty. White	Med.	L. Pomp.	Nov. 1	3.00	27.50
XSP	White Jewell. White suffused with pink. (True strain of White Jewell).	Short	L. Button	Oct. 1-15	4.00	35.00
	Wildfire. Brilliant orange rust. Reflexed blooms on well formed sprays	Med.	L. Pomp.	Nov. 28	8.00	75.00
	Yellow Bird. Yellow	Med.	L. Pomp.	Nov. 18	3.00	27.50
X	Yellow Cordova. Bright yellow. Sport from Cordova	Med.	L. Pomp.	Thanks.	8.00	75.00
	Yellow Dainty Maid. Light yellow. Sport from Dainty Maid	Med.	S. Button	Nov. 1	8.00	75.00
XS	Yellow Dot. (Jablonsky.) Yellow. Sport of Pink Dot	Med.	L. Pomp.	Oct. 25	3.00	27.50
D	Yellow Doty. Yellow	Med.	L. Pomp.	Nov. 1	3.00	27.50
XSP	Yellow Fellow. Yellow	Med.	L. Pomp.	Nov. 15	3.00	27.50
D	Yellow Muskoka. Bronzy yellow	Tall	L. Pomp.	Nov. 10	3.00	27.50
XS	Yellow New York. Yellow. Sport of New York	Med.	Button	Nov. 15	3.00	27.50
D	Yellow Sea Gull. Yellow. Sport from Sea Gull	Med.	L. Pomp.	Nov. 1	7.00	65.00
X	Yellow Silver Star. Yellow. Sport of Silver Star	Tall	L. Pomp.	Dec. 10	3.00	27.50
XP	Yuletide. White. White	Short	L. Pomp.	Dec. 1	3.00	27.50
P	Yuletide. Yellow. Yellow	Short	L. Pomp.	Dec. 1	3.00	27.50
XDP	Yuvawn. Yellow	Med.	L. Pomp.	Nov. 25	3.00	27.50
	Zoe. Golden bronze	Med.	L. Button	Nov. 20	3.00	27.50

"Enclose Your Mum With Your Seed Order"

Anemone Flowered Varieties

X—Extra good or generally accepted best varieties.

P—Indicates varieties suitable for Pot Plants.

D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

Two letters mean, besides being extra good, variety is recommended for Pots or Shading.

	Name and Description	Height	Matures	Price per
				100 1000
XPD	Beautiful Lady. Bright pink petals with creamy white cushion. (Choice color.)	Short	Nov. 20	3.00 27.50
XD	Betty Rose. Pink, both petals and cushion.	Med.	Nov. 1	3.00 27.50
XSD	Blanche. White	Med.	Oct. 27	3.00 27.50
XD	Bronze Norma. Bronze. Sport of Norma.	Med.	Nov. 10 Dec.	3.00 27.50
PD	Bronze Supreme. Bronze with pink cast on ray petals	Tall	Nov. 30	7.00 65.00
D	Bronze Tuxedo. Bronze Sport from Tuxedo	Med.	Nov. 10	8.00 75.00
X	Bronze Volunteer. Rich bronze. Sport of Volunteer	Med.	Thanks.	3.00 27.50
D	Captivation. Mahogany red. (Exhibition)	Tall	Nov. 10	3.00 27.50
D	China Rose. Dragon's blood red	Med.	Nov. 10	3.00 27.50
X	Chrome Emerald. Golden orange with gold cushion	Med.	Nov. 25	4.00 35.00
D	Citrus Queen. Lemon orange	Med.	Dec. 1	5.00 40.00
XD	Coral Blaze. Orange bronze	Med.	Nov. 25	4.00 35.00
XPD	Crimson Glow. Crimson maroon	Med.	Nov. 25-30	3.00 27.50
D	Dark Pink Norma. Dark pink	Med.	Nov. 10 Dec.	3.00 27.50
X	Early Garza Supreme. White	Short	Nov. 25	3.00 27.50
XD	Espy's Dark Fink Supreme. Sport of Pink Supreme. Fine late pink	Tall	Nov. 30	4.00 35.00
D	Espy's White Supreme. White	Tall	Nov. 30	6.00 50.00
XD	Estrelita. Bronze throughout, with full regular cushion	Med.	Nov. 15 & Later	3.00 27.50
XPD	Freida. Pink	Med.	Nov. 15	3.00 27.50
X	Garza Supreme. White. Valuable to hold for January	Short	Dec.	3.00 27.50
XPD	Graceland. Pure white, with yellow center	Short	Oct. 25	3.00 27.50
PD	Izola. Amaranth	Med.	Nov. 1	3.00 27.50
D	John Shields. Yellow	Med.	Nov. 10	3.00 27.50
PD	Laelia. Rose pink	Short	Nov. 1	3.00 27.50
PD	Little America. Snow white. Extra choice. Must be disbudded.	Med.	Nov. 5	8.00 75.00
PD	Long Island Beauty. White with large yellow cushion	Med.	Thanks. & Later	7.00 65.00
XPD	Margo. Pinkish violet outer petals, with high, round, yellow cushion	Short	Nov. 5	3.00 27.50
D	Marietta. Soft pink with very full cushion	Med.	Oct. 20	3.00 27.50
D	Maritza. Bright yellow with full highly rounded cushion	Med.	Thanks.	3.00 27.50
XSD	Norma. Orchid pink petals with golden pink cushion. Excellent.	Med.	Nov. 10 Dec.	3.00 27.50
PD	Noveltie. White throughout, with large cushion	Short	Nov. 15	3.00 27.50
XP	Orchid Beauty. Orchid with golden cushion	Med.	Nov. 15	3.00 27.50
PD	Pink Lady. Pink petals with light pink cushion	Short	Nov. 15	3.00 27.50
XPD	Red Rolinda. Red. Sport of Rolinda	Med.	Nov. 20 Dec. 1	3.00 27.50
	Rio Rita. Yellow	Med.	Nov. 10	3.00 27.50
XPD	Rolinda. Orange bronze	Med.	Nov. 20 Dec. 1	3.00 27.50
	Romantic. Light bronze with bronzy red cushion	Short	Nov. 10	5.00 40.00
XD	Smith's Innocence. White	Tall	Nov. 5	3.00 27.50
D	Stoplight. Terra Cotta petals with low yellow cushion	Med.	Nov. 5	3.00 27.50
X	Sunray. Yellow	Med.	Nov. 15	3.00 27.50
PD	Sunshine. Yellow	Short	Thanks.	3.00 27.50
XD	Susanne Miller. Yellow. Sport of Norma	Tall	Nov. 10 Dec. 1	3.00 27.50

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Anemone Flowered Varieties (Continued)

Name and Description	Height	Matures	Price per	
			100	1000
D The Belle. Pure white	Med.	Nov. 1-5	3.00	27.50
XD The Titan. Scarlet crimson with bronze red cushion	Med.	Nov. 5	3.00	27.50
D Topknot. Creamy white cushion, rosy pink petals	Tall	Nov. 5	3.00	27.50
XD Tuxedo. Pink. Excellent light color	Med.	Nov. 10	3.00	27.50
XD White Anemone. White	Med.	Nov. 1	4.00	35.00
PD White Izola. White. Sport of Izola	Med.	Nov. 1	3.00	27.50
XPD White Norma. White	Med.	Nov. 1	3.00	27.50
X Yellow Blanche. Yellow. Sport of Blanche	Med.	Oct. 27	3.00	27.50
PD Yellow Estrelita. Yellow. Sport from Estrelita	Med.	Nov. 15	8.00	75.00
X Yellow Garza Supreme. Yellow	Short	Dec. 1	3.00	27.50
XPD Yellow Rolinda. Deep golden yellow. Sport of Rolinda	Med.	Nov. 20		
D Yellow Supreme. Yellow. Sport from Pink Supreme	Tall	Nov. 30	8.00	75.00
Yolanda. Yellow	Med.	Thanks. & Later	8.00	75.00

Single Varieties--Daisy Type

X—Extra good or generally accepted best varieties.

S—Indicates varieties we find most suitable for shading.

P—Indicates varieties suitable for Pot Plants.

D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

Name and Description	Height	Matures	Price per	
			100	1000
X Absolute. Scarlet bronze with yellow center	Med.	Nov. 1	4.00	35.00
X Aloma. Terra Cotta bronze with yellow center	Med.	Oct. 15	3.00	27.50
XP Buckingham, Bronze. Bronze	Short	Nov. 5	3.00	27.50
XP Buckingham, W. H. Pink	Short	Nov. 5	3.00	27.50
XPD Carnelia. Red	Short	Nov. 30	4.00	35.00
Charter Oak. Yellow	Tall	Nov. 25	3.00	27.50
Dawn. (Hasegawa.) Chestnut bronze	Tall	Dec. 10-25	4.00	35.00
D. Baker. Red	Med.	Oct. 15-30	3.00	27.50
X Elizabeth Firestone. Pink	Med.	Nov. 15 & Later	3.00	27.50
X Elizabeth McDowell. Bronze	Med.	Nov. 15	3.00	27.50
P Fairy Queen. Intense Orchid Pink	Short	Nov. 10-15	15.00	125.00
Gladys Duckham. White	Med.	Nov. 15-30	3.00	27.50
X Golden Mensa. Yellow	Med.	Nov. 10	3.00	27.50
XS Gretchen Piper. Yellow	Med.	Oct. 25	3.00	27.50
Hasegawa Pink. Pink with golden center	Med.	Nov. 15-25	4.00	35.00
X Hasegawa Poinsettia. Poinsettia red	Tall	Thanks.	3.00	27.50
XP Helen Hubbard. Red	Med.	Thanks.	3.00	27.50
Ida Skiff. Bronze	Short	Nov. 1	3.00	27.50
D Joan Piper. Amber bronze	Med.	Oct. 10-	4.00	35.00
Joe Beuerlein Crimson Red. Prominent golden yellow disc	Med.	Dec. 5	8.00	75.00
XS Lighthouse. Bronze shading to watermelon red	Med.	Nov. 1-15	4.00	35.00
X Mason's Bronze. Burnt orange	Med.	Nov. 5	4.00	35.00
XPD Melba. Reddish bronze	Med.	Nov. 5	3.00	27.50
Miss Isabelle. Bronze	Tall	Thanks.	3.00	27.50
Mrs. Darling. Red	Med.	Nov. 1	3.00	27.50
Mrs. E. D. Godfrey. Light pink	Tall	Thanks.	3.00	27.50
Pink Pride. Pink	Med.	Nov. 15-30	3.00	27.50
Radiant. Bright red	Med.	Nov. 5-10	3.00	27.50
XPD Red Melba. Red	Med.	Nov. 5	4.00	35.00

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Single Varieties—Daisy Type (Continued)

Name and Description			Height	Matures	Price per	
			100	1000	100	1000
XD	Red Rover. Crimson orange		Med.	Nov. 5	3.00	27.50
XP	Sunburst. Sunburst orange		Med.	Nov. 25	4.00	35.00
X	Sunny Boy. Yellow		Med.	Nov. 15	3.00	27.50
X	Sunset. Yellow		Med.	Dec. 10-25	3.00	27.50
XP	Tagoya. Brilliant goya red		Short	Nov. 1-5	3.00	27.50
P	Thanksgiving Bronze. Dark bronze		Med.	Thanks.	3.00	27.50
XD	Valencia. Orchid pink		Tall	Nov. 30	3.00	27.50
	White Godfrey. White		Tall	Thanks.	3.00	27.50
X	White Mensa. White		Med.	Thanks.	3.00	27.50
X	Woburn. Pink		Tall	Nov. 15	3.00	27.50
	Yellow Godfrey. Yellow		Tall	Thanks.	3.00	27.50

Hardy Varieties

X—Extra good or generally accepted best varieties.

P—Indicates varieties suitable for Pot Plants.

Name and Description			Height	Type	Matures	Price per	
			100	1000		100	1000
X	A. Barham. Orange bronze		Short	Decorative	Oct. 1	3.00	27.50
XS	Adelaide. Mahogany		Med.	Button	Early Oct.	3.00	27.50
X	Albert Muller. Apricot suffused with pink		Med.	Decorative	Oct. 1	3.00	27.50
X	Aladdin. Bronze		Short	Decorative	Sept.	3.00	27.50
XP	Amelia. (Pink Cushion.) Bright pink		Short	Decorative	Sept.	3.00	27.50
X	Barbara Cummings. Yellow shading to bronze		Med.	Decorative	Sept.	3.00	27.50
	Carrie. Yellow		Med.	Decorative	Early	3.00	27.50
XS	Cavalier. Rich vermillion-red		Med.	Single	Oct. 15	3.00	27.50
	Dazzler. Cardinal red		Med.	Single	Oct. 10-15	3.00	27.50
XP	Early Bronze. Bronze		Short	Button	Sept.	3.00	27.50
P	Early Yellow. Yellow. Sport of Early Bronze		Short	Button	Sept. 15	4.00	35.00
XP	Eden. Rose pink		Short	Decorative	Oct. 1	3.00	27.50
X	Francis Whittlesey. Rich bronze and garnet		Short	Decorative	Sept. 30	3.00	27.50
X	Ganna. Bright pink		Med.	Decorative	Oct. 12	3.00	27.50
P	Glada. Soft pink		Short	Decorative	Sept.	3.00	27.50
X	Granny Scovill. Warm coral bronze		Dwarf	Decorative	Oct. 15	3.00	27.50
	Gypsy Girl. Chestnut crimson		Short	Single	Early Oct.	3.00	27.50
X	Indian Summer. Bronze		Med.	Single	Oct. 25	4.00	35.00
	Jack Bannister. Light yellow		Med.	Decorative	Oct. 10	3.00	27.50
X	Jean Cummings. White		Med.	Decorative	Sept.	3.00	27.50
X	Jean Treadway. Pink with dark center		Med.	Decorative	Oct. 1-10	3.00	27.50
XP	Judith Anderson. Yellow		Short	Button	Oct. 25	4.00	35.00
X	Lorelei. Yellow		Med.	Decorative	Sept. 10	3.00	27.50
	Margot. White		Short	Button	Oct. 8	3.00	27.50
X	Normandie. White		Short	Decorative	Sept.	3.00	27.50
	Provence. Soft pink blended with yellow		Med.	Decorative	Sept.	3.00	27.50
	Red Flare. Bright red		Med.	Button	Oct. 15	3.00	27.50
X	R. Marion Hatton. Canary yellow		Med.	Decorative	Oct. 1-10	3.00	27.50
X	Rosy Gem. Bright pink or rose		Med.	Decorative	Oct. 15	3.00	27.50
X	Ruth Cummings. Reddish bronze		Med.	Decorative	Early Oct.	3.00	27.50
	Ruth Hatton. Ivory white		Short	Decorative	Oct. 10	3.00	27.50
	September Queen. White		Short	Decorative	Sept.	3.00	27.50
	Tasiva. White		Med.	Decorative	Sept.	3.00	27.50
	Vivid. Rosy crimson		Med.	Decorative	Oct. 1-10	3.00	27.50
X	Wolverine. Yellow		Med.	Decorative	Sept.	3.00	27.50
P	Yellow Gem. Canary yellow		Med.	Button	Oct. 5-10	3.00	27.50
X	Yellow Normandie. Yellow		Med.	Decorative	Early	3.00	27.50

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Japanese Mountain or Cascade Varieties

P—Indicates varieties suitable for Pot Plants.

Name and Description	Height	Matures	Price per	
			100	1000
Aqappina. Mahogany with tinge of yellow on the tips of the cushion florets	Med.	Nov. 10	6.00	50.00
P Anna. Pure white single	Short	Oct. 30	6.00	50.00
Brown Button. Bronze	Med.	Nov. 10	6.00	50.00
P Jane Harte. Yellow single	Short	Oct. 30	6.00	50.00

Pot Plant Varieties

In addition to varieties listed here as essentially intended for pot plant culture, many of the varieties listed under Pompons are excellent as pot plants. Short and medium sorts should be used for this. A number of such varieties are denoted by the letter (P).

X—Extra good or generally accepted best varieties.

D—Indicates smaller flowered varieties most suitable for growing as disbudded pompons.

Name and Description	Height	Type	Matures	Price per	
				100	1000
X Autumn Glow. Bronze red	Short	L. Pomp.	Nov. 1	4.00	35.00
X Benoit. Deep pink	Short	L. Pomp.	Oct. 20-25	3.00	27.50
X Bright Light. Bright yellow	Short	L. Pomp.	Nov. 20	3.00	27.50
D Bronze Prince. Bronze	Short	L. Pomp.	Nov. 1	3.00	27.50
Brutus. Bronze	Short	L. Pomp.	Nov. 10	4.00	35.00
XD Caprice, Butler. Deep pink	Short	L. Pomp.	Oct.	3.00	27.50
XD Caprice, Lilac. Deep lilac	Short	L. Pomp.	Oct.	3.00	27.50
XD Caprice, Purple. Purple	Short	L. Pomp.	Oct.	3.00	27.50
Caprice, White. White	Short	L. Pomp.	Oct.	3.00	27.50
Caprice, Yellow. Yellow	Short	L. Pomp.	Oct.	3.00	27.50
X Floradora. Light bronze florets, orange cushion	Short	Anemone	Nov. 1	3.00	27.50
D Greystone. Golden orange	Short	L. Pomp.	Nov. 10	3.00	27.50
XD Kathleen Thompson. Bronze	Short	L. Pomp.	Oct.	3.00	27.50
XD Ohio State. Yellow	Short	Anemone	Nov. 1	3.00	27.50
P Orchid Gem. Pink. Very attractive orchid shade. Free flowering habit	Short	Single	Oct. 25	8.00	75.00
Patty. Pink	Short	L. Pomp.	Late	3.00	27.50
X Pygmy. Light pink	Short	L. Pomp.	Nov. 10	3.00	27.50
PD Rose Mandel. Deep lavender. Pot plant variety ..	Short	L. Pomp.	Oct. 15	4.00	35.00
XD Savanta. White, with tint of pink	Short	L. Pomp.	Nov. 1	3.00	27.50
XD Titian Beauty. Bronze	Short	Anemone	Nov. 25	3.00	27.50
XD W. H. Lincoln. Yellow	Short	L. Pomp.	Late	3.00	27.50

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Hardy Korean Varieties

Name and Description	Height	Type	Matures	Price per	
				100	1000
Agnes Selkirk Clark. Apricot salmon	Med.	Single	Sept. 25	7.00	65.00
Aphrodite. Blush pink. Extra free single	Short	Single	Oct. 15	4.00	35.00
Apollo. Bronze red	Med.	Single	Oct. 12	3.00	27.50
Ceres. Old gold	Med.	Single	Oct. 10	3.00	27.50
Country Girl. Pink	Tall	Single	Oct. 10	3.00	27.50
Daphne. Pink	Med.	Single	Oct. 12	3.00	27.50
Diana. Rose pink	Med.	Single	Oct. 12	3.00	27.50
Ember. Coral and orange bronze	Med.	Decorative	Oct. 15	8.00	75.00
Hebe. Lavender pink	Med.	Single	Oct. 15	3.00	27.50
Innocence. White	Short	Single	Sept.	3.00	27.50
King Midas. Yellow	Med.	Decorative	Sept. 30	8.00	75.00
Louise Schling. Bronze salmon	Med.	Single	Oct. 5	3.00	27.50
Mars. Wine-red	Med.	Single	Oct. 15	3.00	27.50
Mercury. Blend of old rose and salmon	Med.	Single	Sept. 30	3.00	27.50
Nancy Copeland. Red	Med.	Single	Sept. 25	7.00	65.00
Orion. Canary yellow	Med.	Single	Oct. 5	3.00	27.50
Pink Lustre. Orchid pink	Med.	Single	Sept. 25	7.00	65.00
Romany. Reddish bronze	Med.	Decorative	Oct. 5	4.00	35.00
Saturn. Bronze	Med.	Single	Oct. 12	4.00	35.00
The Moor. Amaranth purple	Short	Decorative	Sept. 25	8.00	75.00
The Urchin. Crushed raspberry and gold	Med.	Semi-double	Oct. 10	7.00	65.00
Venus. Pink	Med.	Single	Oct. 12	4.00	35.00
Vulcan. Bronze crimson	Med.	Single	Oct. 5	3.00	27.50

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One of our cold houses showing cloth used on roof. This material is waterproofed canvas cost around 16c per sq. yd. and is used for early flowering shade, after which it is left in position to be used for protecting the crop in flower. The sash bars used in this cold house are spaced 2 ft. and are only for supporting the rather heavy cloth. If we were to put up another, we would use pipe frame construction, believing it would pay because of being more rigid.

CULTURAL NOTES

The minor details of propagating and planting are pretty well understood, so we will confine this heading to a few fundamentals. The soil might be considered the basic one, tho it is generally felt that any old soil is good enough for this crop. With some reservations this is not far from so. We really prefer 2-3 yr. old used greenhouse soil to fresh well manured material because the fertility in the used seems usually more completely available. Anyhow, we generally note better results from its use for mums if the soil is sterilized or has been within a year. If soil has been used 3 years and it can't be sterilized, we suggest that fresh, well manured soil will be safer. We find that such fresh soil will stand considerable top dressing during the growing season of the crop.

If ground beds are used they must be well drained, but this is equally important for any crop. The tendency with ground beds is to get overwatered. This is especially so during the high temperature months of midsummer when much overhead spraying is done. In the heat of midsummer, growth is inclined to stand still and this, of course, means that the roots are not active and for that

reason are easily overwatered. With the coming of cooler weather, growth picks up and will stand freer water and feed. Mums are naturally cool temperature plants. It follows that they become weakened by high temperatures.

When overwatering is combined with excessive heat, the spread of a form of fungous rot on the foliage is encouraged. When this gets bad, it accounts for the weak spots in the bed so frequently noted especially in pompons on the ground. The spread of this rot can be checked some by spraying with Bordeaux Mixture, but it is far better to keep growth as resistant to this rot as possible, by good cultural practices. Another cause for rot that frequently weakens growth is lack of free air circulation, that might in turn be caused by overcrowding. Also, we believe black cloth shading, thru shutting the free circulation of air from them all night is responsible for the spread of this trouble. For this reason it is better to remove at least the side cloth after darkness sets in and adjusting it in place before daylight. This work might be simplified by applying the shade several hours earlier in the afternoon and removing it after dark. This

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Outside view of House on Previous Page showing rope and pulley method of adjusting cloth.

would, of course, make it unnecessary to have it on in the morning. All that is important is the total number of darkened hours.

Only objection we can see to this is that during early evening hours light is stronger than early in the morning, making a better grade of cloth necessary to get the same degree of darkness to be had after 6:00 P. M. and before 7 A. M.

Excessive atmospheric moisture encourages any form of rust or rot. For this reason, don't do any overhead spraying on shaded beds late in the day.

EARLY AND MID-SEASON MUMS IN SEPTEMBER

Most mum markets were not fully cared for with good stock during the last half of September of the past year. California had to supply many flowers that could have been grown locally. The production of good shaded stock in the Middle West and East is not difficult, but some points must be watched or second grade flowers that are always in oversupply will result. Probably the most important point is planting early, in our latitude May 15-20; for some naturally long stemmed kind June 1 will do, if they take hold and grow on unchecked. Reason for early planting is that when buds are set a month or more earlier than normal, the stems will of course not have time to get so long as when they form normally. Our earliest shading date has been July 12th. Next season this will be advanced to July 5. The height of big mums when shading starts should

be 2½ to 3 ft., depending on height the variety naturally grows. When in flower they will have drawn up to 4 and 4½ ft. For the pompons when shading starts, the height should be around 16 to 20 in. They will lengthen 14-16 in. These figures for all classes should be accepted as minimum. If your stock is substantially below them when shading should start, better let them come naturally, for most markets are oversupplied with short or poor stock, especially pompons.

SHADING

Mums belong to what is known as "short day" plants. By this is meant they will not set buds until the days are shortening. This is easily demonstrated by the fact that if daylight hours are lengthened with artificial light, setting of buds is delayed. This is taken advantage of by flowering especially desirable late varieties beyond their normal season. This will be discussed further.

Methods of applying shade vary with most growers. It depends on the material on hand and the location of the beds. With a small house devoted entirely to this shaded crop, the most efficient method we find is the one pictured in cut on this page. When this method is used, the planting should be arranged so the shading on all the house can start on the same date. If but one house is grown and a succession of flowers is wanted, this can be arranged by planting early and late varieties. Late ones require more time to finish than do

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One of our earlier forms of cold house construction with which hot bed sash are used. The heavy material used makes it rather dark even in midsummer, but we like the sash covering that of course leaves the house much lighter than the heavy canvas covering that sometimes must be left on 2 or 3 days at a time to protect the crop during wet fall weather.

early kind. A succession of White Mums can be had from one shading date by planting Silver Sheen and the later variety Betsy Ross. In yellows, Good News is followed nicely by Golden Pearson. While black sateen cloth pictured in cut No. 1 is most widely used, it is by no means the only suitable material. The past season we used an oil treated green canvas supplied by the Windsor Company. It is heavy and should last and we believe it will shed light for as many years as will black sateen that we find good for two to three seasons. The third season some light filters thru it; when this happens about a week longer must be counted on to set buds. We have also tried a

heavy kraft paper. A 6-8c per Sq. Yd. grade we find tears easily. 12-15c buys a substantial grade that will last, but we prefer the oil treated green canvas that costs but little more. In large high houses, where there are no interfering posts, a frame work is built over the beds with wire stretched over them lengthwise —on the wire the shading material is unrolled, covering walks as well as beds. With these large areas and in the over-the-roof plan, the shading material is handled in 18 ft. sections by means of a round pole to which it is attached and unrolled clear over the bed and down the end. The advantage of this over-all plan, compared with shading beds individually,



Outside view of above house. Note Aster house cloth used on sides to keep out insects. Also cloth on roof that is readily rolled up and down with ropes and pulleys. This type of construction complete with canvas cloth costs us 16c per sq. ft. of ground covered. In a few years this type of construction will pay out much better than a lighter and cheaper arrangement frequently used.

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is in the considerably reduced amount of cloth required for the sides.

For individual beds, the same unrolling cloth over wires is used. The side piece is generally separate and is pushed back and forth on rings, while the ends are a continuation of the top. In building the supporting frame work, we find a height of 5½ ft. for mums and 4 ft. for pom-poms. about right.

COLD HOUSES

Houses No. 1, 2, and 3 pictured with this are what we refer to as cold houses. They are with open sides and some forms are with open gables. As will be noted, they enjoy protected areas between large detached houses. Since it is easily done, we run a few 1 in. steam pipes thru them, not only for a possible freeze, but to use when several days of wet weather might spot large flowers. Pompoms are largely hard enough to withstand considerable moisture, but in our latitude there is always the danger of a real freeze late in September.

Any shading material used for these cold houses should be left in position ready to unroll for frost protection until the crop is cut out. The green cloth already referred to, we find just fairly successful for protecting large mums. While it is practically waterproof on a roof of average pitch, it does leave a house quite dark sometimes 2-3 days when it is used against wet or frosty weather. Also, it may leak some after a year's use. We should hardly recommend it for big mums, but we believe it safe for pompoms. This leaves some form of glass covering the safest protection for big mums flowered after Mid-September in our latitude. You might get by three seasons out of four with nothing but heavy cloth protection for big mums, but serious loss the fourth season might easily pay for a more substantial protection. Next season we are trying a cold mum house protected with a material known as Flexo Glass. This is a cloth treated or soaked with a wax or paraffin, making it waterproof. This material has been extensively tried out and used by a number of successful growers and found satisfactory. This material is made by the Flexo Glass Co., 1457 N. Cicero Ave., Chicago, Ill. and costs around 15c a sq. yd. We will use 3 ft. widths in frames to fit between 3 ft. spaced bars—these frames to reach from gutter to ridge. They will be placed in position after the buds are set, leaving the plants exposed to the full air of summer ex-

cept for the shade of a thin grade of cloth (12 threads to the inch) that we stretch over all such exposed mums during summer. It affords some protection from drying wind and keeps the growth softer. It also protects from summer insects. We find our cold houses, as equipped, safe to figure on a crop of big mums up to Oct. 15-20, but when we have a house in at this late date, we are prepared with sash to close in the sides, for by late October, 15-20 degree temperature must be figured with.

OUT IN THE OPEN

While we occasionally hear of big mums being successfully flowered early without glass, or Flexo glass, this method should not be depended on in the Central states. Big mums are easily damaged by wind and moisture. The foliage can be damaged as some California mums are, but any irregularity in the flowers condemns them. Pompoms on the other hand are harder and stand considerable more exposure. Most any Oct. variety is easily flowered by Sept. 15-20 with no more protection against frost than that afforded by the material used to darken them. But the shading should start early—July 5, and the planting must be done early or they will be short stemmed and meet a world of competition. Because of the comparative ease with which this outdoor crop is produced, the profit in them the past few seasons has been close; in fact, they have been a loss unless long stemmed and clean.

November, or even late October varieties, should not be attempted in this early outdoor growing but such are flowered perfectly in protected cold houses. It will be noted we refer to 3 distinct uses or kinds of cloth. To clarify this, we should say aster or cheese cloth is used only for protection against summer sun and insects. "Black Cloth" is the opaque or nearly lightproof material applied 3-4 weeks to induce premature setting of buds. This same material is generally left in position to protect them from cold or rain. And third, Flexo Glass cloth, that is only for such protection.

Growing shaded pompoms in the open is not as profitable as it might seem. It costs to get good stock and plant early, when a greenhouse grower is usually quite busy and occasionally this planting must be protected against a late May frost.

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APPLYING SHADE

With new cloth that produces a maximum shade, we roll the cloth over them at 6 P. M., leaving it until 7 A. M., following morning. If the cloth is worn some thru several seasons use, we apply it an hour earlier. If this isn't done, it will require longer to get buds set. With large mums, a few days over three weeks is ordinarily required to set buds, after which, discontinue shading. With the pompons, the shading must be continued after the first or center bud is set. This is necessary to get the side buds set, and usually calls for 10 days or 2 weeks longer shading. On October pompons, around 60 days can be safely figured from the start of shading to cutting of crop. November varieties will run a week or 10 days over this. Big mums will cover about the same time from shading to cutting, tho varieties vary in this class. In shading there is, of course, no need for it after dark; so if it blows off, no harm will be done. In fact, if you miss the covering entirely a night or two, it will make no material difference.

TO DELAY FLOWERING

This is done thru prolonging daylight with electric lights as already suggested. For mid-season kind, turn on lights about Aug. 20. For December varieties, start a week later. Do not start later, or finished stock will tend to have long necks and sometimes, malformed flowers. Use 40 Watt bulbs with reflectors. Space lights 5 feet and high enough to spread the light well over the bed. Turn lights on when darkness is reached and for 3 hours daily. Continue the lighting for three-fourths as many days as it is wished to delay flowering; in other words, if you wish to defer flowering 20 days, keep the lights on them 15 days. It is not considered practical to delay flowering more than 3 or 4 weeks. Take first bud showing after light treatment stops. While the behavior of varieties varies under this treatment, success with the above suggestions has been fairly uniform.

BLACK CLOTH MECHANICS

"Over the top" shading, as we call it, requires much less time to operate and takes even less cloth than covering beds individually. The large 18 foot strips can be rolled up by pulleys in a fraction of the time it would take to cover the space doing each bed separately. It's simple, too. In effect, we simply start at the ground and roll each 18 foot width of cloth on up the ridge, pictured on page 20. Here it stays all day. As you will see in the photo, this is done by a rope and pulley, operated from the ground. Here are details:

Cut cloth in lengths long enough to go clear across house, from ground, over ridge and down other side; we find 18 feet the most convenient width. Before you spread cloth over the house, fasten a rope to the ridge 4 feet inward from each edge of each 18 foot width. Make it plenty long (see later) and let it trail on the ground. Now spread the cloth over the house, on top of the rope, and fasten it to the ridge with a strip of lath. To prevent light leaking thru, allow one foot overlap between eighteen foot sections. Now staple two pulleys to the ridge above the cloth at the same point where ropes were tied previously—4 feet inward from each edge of each 18 foot strip. Now, for a "core" to roll the cloth up on, nail an 18 foot strip of 2 in. x 2 in. along the edge of cloth near the ground. Then, so that you can pull the cloth down from the ridge, attach a cord to this pole and make it long enough to reach clear from ridge to ground even when rolled up in the cloth.

Now make it work. The long (remember?) rope you tied to the ridge pole should reach down under the cloth to the ground, up over it to the ridge, through the pulley, then back to the ground—and your hands. Pull it, and the 18 foot strip of cloth should roll nicely up the side of the house.



Our Mid-September Cold House of "Silver Sheen." Photographed September 14

Better Mums for '39

The list of Mums in all classes is as rich as it is extensive. It is surprising to experienced growers to meet frequently with real finds, probably sent out a few years ago and today in the standard price list. Chances are you will find better ones in this catalog than you are using. We will gladly help freshen your list. Write us. If you have a trace of Midge in your stock, we know from experience it will pay you big to discard and burn every trace of your old stock and get in clean cuttings.

Gro. J. Ball.

"Enclose Your Mum With Your Seed Order"